

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A conversation processing apparatus for holding a conversation with a user, comprising:

first storage means for storing a plurality of pieces of first information concerning a plurality of topics, the topics being a function of one or more user profiles provided by the apparatus;

second storage means for storing second information concerning a present topic being discussed,

wherein each of a plurality of items included in said second information is assigned at least two values, one indicating a knowledge level of said user and one indicating a knowledge level of said conversation processing apparatus,

wherein said values vary during the conversation as a function of content of the conversation;

determining means for determining whether to change the topic,

wherein the determining whether the topic is changed is a function of interval normalization of an input pattern;

selection means for selecting, when said determining means determines to change the topic, a new topic to change to from among the topics stored in said first storage means; and

changing means for reading the first information concerning the topic selected by said selection means from said first storage means and for changing the topic by storing the read information in said second storage means,

wherein said selection means selects the new topic by computing a value based on an association between attributes of each piece of the first information and attributes of the second information and selecting the first information with the greatest value as the new topic, or by reading a piece of the first information, computing the value based on the association between the attributes of the first information and the attributes of the second information, and selecting the first information as the new topic if the first information has a value greater than a threshold, and

wherein the attributes of the first information are weighted as a function of a relevance to the topic, and

wherein the weighted value is used by the selection means when computing the value.

2. (Original) A conversation processing apparatus according to Claim 1, further comprising:

third storage means for storing a topic which has been discussed with the user in a history,

wherein said selection means selects, as the new topic, a topic other than those stored in the history in said third storage means.

3. (Original) A conversation processing apparatus according to Claim 1, wherein, when said determination means determines to change the topic in response to the change of topic introduced by the user, said selection means selects a topic which is the most closely related to the topic introduced by the user from among the topics stored in said first storage means.

4. (Canceled)

5. (Previously Presented) A conversation processing apparatus according to Claim 1, wherein the attributes include at least one of a keyword, a category, a place, and a time.

6. (Previously Presented) A conversation processing apparatus according to Claim 1, wherein the value based on the association between the attributes of the first information and the attributes of the second information is stored in the form of a table, said table being updated.

7. (Original) A conversation processing apparatus according to Claim 6, wherein, when selecting the new topic using the table, said selection means weights the value in the table for the first information having the same attributes as those of the second information and uses the weighted table, thereby selecting the new topic.

8. (Previously Presented) A conversation processing apparatus according to Claim 1, wherein the conversation is held in one of oral and in written form.

9. (Original) A conversation processing apparatus according to Claim 1, wherein said conversation processing apparatus is included in a robot.

10. (Currently Amended) A conversation processing method for a conversation processing apparatus for holding a conversation with a user, comprising:

a providing step of providing, to a remote location, one or more user profiles as a function of user preferences;

a storage controlling step of controlling storage of information concerning a plurality of topics, the topics being a function of the one or more user profiles,

wherein each of a plurality of items included in said information is assigned at least two values, one indicating a knowledge level of said user and one indicating a knowledge level of said conversation processing apparatus,

wherein said values vary during the conversation as a function of content of the conversation;

a determining step of determining whether to change the topic,

wherein the determining whether the topic is changed is a function of interval normalization of an input pattern;

a selecting step of selecting, when the topic is determined to be changed in said determining step, a topic which is determined to be appropriate as a new topic from among the topics stored in said storage controlling step; and

a changing step of using the information concerning the topic selected in said selecting step as information concerning the new topic, thereby changing the topic,

wherein said selection step selects the new topic by computing a value based on an association between attributes of each piece of the first information and attributes of the second information and selecting the first information with the greatest value as the new topic, or by reading a piece of the first information, computing the value based on the association between the attributes of the first information and the attributes of the second information, and selecting the first information as the new topic if the first information has a value greater than a threshold, and

wherein the attributes of the first information are weighted as a function of a relevance to the topic, and

wherein the weighted value is used by the selecting step when computing the value.

11. (Currently Amended) A recording medium having recorded thereon a computer-readable conversation processing program for holding a conversation with a user, the program comprising:

a providing step of providing, to a remote location, one or more user profiles as a function of user preferences;

a storage controlling step of controlling storage of information concerning a plurality of topics, the topics being a function of the one or more user profiles,

wherein each of a plurality of items included in said information is assigned at least two values, one indicating a knowledge level of said user and one indicating a knowledge level of said conversation processing apparatus,

wherein said values vary during the conversation as a function of content of the conversation;

a determining step of determining whether to change the topic,

wherein the determining whether the topic is changed is a function of interval normalization of an input pattern;

a selecting step of selecting, when the topic is determined to be changed in said determining step, a topic which is determined to be appropriate as a new topic from among the topics stored in said storage controlling step; and

a changing step of using the information concerning the topic selected in said selecting step as information concerning the new topic, thereby changing the topic,

wherein said selection step selects the new topic by computing a value based on an association between attributes of each piece of the first information and attributes of the second information and selecting the first information with the greatest value as the new topic, or by reading a piece of the first information, computing the value based on the association between the attributes of the first information and the attributes of the second information, and selecting the first information as the new topic if the first information has a value greater than a threshold, and

wherein the attributes of the first information are weighted as a function of a relevance to the topic, and

wherein the weighted value is used by the selecting means when computing the value.

12. (Previously Presented) A conversation processing apparatus according to Claim 1, wherein the one or more user profiles are updated as a function of information communicated during conversation with an associated user.

13. (Previously Presented) A conversation processing apparatus according to Claim 1, wherein the determining means for determining whether to change the topic utilizes utterances from a user.

14. (Previously Presented) A conversation processing apparatus according to Claim 1, further comprising:
communication means for acquiring additional information on currently stored topics and on a plurality of new topics that relate to one or more learned user preferences.

15. (Previously Presented) A conversation processing apparatus according to Claim 1,
wherein said user profiles include at least a numerical value for each of said plurality of topics, indicating a preference level to the user.